

Appl. No. 09/977,991
Reply to Office Action dated April 23, 2007

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REMARKS/ARGUMENTS

The Examiner has rejected all of the claims as being unpatentable over Ramos et al. (US Patent No. 7,072,663) in view of Shakhgildian (US Patent No. 6,584,325). To begin it is noted that claims 16 through 30 have been cancelled rendering their rejection moot.

The Examiner concedes Ramos does not explicitly disclose a separate uplink and downlink candidate base station, but argues that "it is obvious to one of ordinary skill in the art that because the CRRM takes into account uplink and downlink information in prioritizing the cell candidate, that it may order or arrange the list based on the uplink, downlink, or both" (emphasis added). It seems logical to agree that Ramos does teach arranging the list based on uplink, downlink, or both as argued. However, there is only one list in Ramos. This is because a compromise between uplink and downlink performance is being sought. Ramos teaches away from maintaining separate lists – how would a compromise between uplink and downlink performance, the entire objective of Ramos, be possible if two separate lists were maintained? See for example col. 7 lines 15 to 32 which detail a particular prioritization scheme. Each cell is given a single weight.

Thus, the limitation pertaining to storing uplink candidate set list and downlink candidate set list is not taught in Ramos, and it is respectfully submitted that the Examiner's logic in suggesting this limitation would be obvious having regard to Ramos is flawed, in that there is still only a suggestion of one list.

Ramos of course does not teach "determining a predominant direction of traffic with respect to the terminal". In Ramos, the CRRM may consider the current traffic load of the cell (col. 5 line 15) and the current total HW utilization of the cell references (col. 5 line 51). Both are parameters of the cell as a whole, i.e. system utilization parameters. In contrast, the step being claimed relates to traffic of the terminal. Is the particular terminal's traffic predominantly uplink or downlink? None of the other parameters listed in Ramos (see col. 6 line 56 → col. 7 line 5) relate to the predominant direction of terminal specific traffic. Even the QoS parameter

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relates to guaranteed throughputs to be provided by the system, as opposed to what is the actual predominant direction of traffic. The QoS for uplink and downlink may be identical, while the actual traffic volume characteristics differ significantly.

Ramos teaches a method of selecting a base station based on a compromise between uplink and downlink performance. As such, whether or not traffic is predominantly uplink or downlink is irrelevant.

In contrast, the method of base station selection being claimed in claim 1 is not based on a compromise between uplink and downlink performance. Rather, two independent lists are maintained, and when traffic is predominantly in the uplink direction, the best base station for uplink performance is selected, with disregard to downlink performance. Similarly, when the traffic is predominantly in the downlink direction, the best base station for downlink performance is selected, with disregard to uplink performance.

Thus, the additional steps of performing base station selection from the uplink candidate set or the downlink candidate set are also not taught in Ramos. In fact, the Examiner has conceded that Ramos does not explicitly teach or disclose selecting an optimum base station if the direction of traffic is either in the downlink or uplink direction.

In summary, it is respectfully submitted that none of the steps recited in claim 1 is taught in Ramos.

Shakhgildian

As indicated above, the Examiner had specifically conceded that Ramos does not explicitly teach or disclose selecting an optimum base station if the direction of traffic is either in the downlink or uplink direction.

Although the Examiner did not say as much, it seems he is also conceding that Ramos does not teach determining a predominant direction of traffic with respect to the terminal.

As argued above, applicant also submits that Ramos does not teach the other steps recited, namely storing uplink candidate set, storing a downlink candidate set.

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The Examiner argues that Shakhgildian performs cell selection based upon the calculation of an uplink and a downlink performance indicator. This indication may be identical to the received pilot signal power level for the downlink performance indicator and the required transmit power of the Physical Random Access Channel (PRACH) for the uplink performance indicator. Applicant agrees with the Examiner up to this point. The Examiner goes on to include, in brackets:

“(determining the predominant direction of traffic with respect to the terminal)”

However, the subject matter in brackets is neither disclosed in Shakhgildian, nor does it logically follow from the preceding narrative. This is obviously an important step in claim 1, since, having determined the predominant direction, one candidate set or the other is used to perform base station selection. It is respectfully submitted that determining performance indicators, such as pilot signal strengths, and required transmit power, have nothing to do with determining the predominant direction of traffic. Rather, they have to do with the quality of the uplink and downlink channels. The quality of the uplink and downlink channels may very well be considered in determining the uplink and downlink candidate sets of applicants' claim 1. However, nothing in Shakhgildian suggests the claimed step of “determining the predominant direction of traffic with respect to the terminal” (emphasis added).

Shakhgildian again concerns with making a compromise between uplink and downlink performance. This is explicitly stated in col. 5 lines 60-67 which read:

“... the serving base station is selected as the base station having both the best uplink and downlink performance indicator if such a base station exists. If no base station has both the best uplink and downlink performance indicator, then a combined performance indicator is calculated and the serving base station is selected as the base station having the best combined performance indicator”

Clearly, a determination of the predominant direction of traffic with respect to the terminal is completely irrelevant in such a scheme.

Having determined that many of the claimed limitations are missing from the references,

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it is respectfully submitted that there has been no prima facie case of obviousness established by the Examiner. In view of this, it is not necessary to consider in detail the requirement to establish motivation to combine. To be clear for the record however, Applicant is explicitly not conceding that the required motivation to combine Ramos and Shakhgildian has been established.

The same arguments apply to independent claim 9.

Favourable consideration and allowance is respectfully requested. In view of the lengthy prosecution thus far, the Examiner is respectfully requested to contact the undersigned in the event any further discussion of the arguments presented herein is warranted.

Respectfully submitted,

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